

**Cruise:** SKO0313  
**Ship:** M/V Skogafoss  
**Dates:** December 6 - 14, 2003  
**Chief Scientist:** not applicable  
**Equipment:** Surface samples collected.  
**Total number of stations:** VOS Underway Cruise

### **Sample Collection**

The discrete samples were collected by Kevin Sullivan at a tap on the side of the TSG enclosure in the engine room. The underway pCO<sub>2</sub> instrument and the TSG were supplied with water from the flow used for engine cooling. The water flowing through the TSG is believed to be 0.2 degrees C warmer than in-situ SST. The date and time listed in the data file are UTC when each sample bottle was collected.

#### **DIC:**

17 locations, 24 samples each 500-ml, 7 sets of duplicate samples  
Sample\_ID#: 146 – 177, A39 – A209  
PI: Dr. Rik Wanninkhof  
Analyzed by: Esa Peltola

#### **Salinity\_2:**

4 locations, 24 samples each 180 ml  
Sample\_ID#: 1 - 24  
PI: Dr. Jonathan Hare  
Analyzed by: Northeast Fisheries Science Center, Narragansett Laboratory

### **Sample Analysis**

#### **DIC:**

Analysis date: April 27-28, 2004  
Coulometer used: AOML1  
Blank range: 13.4-26.0 counts/min  
CRM # used and assigned value (include both DIC and salinity): Batch 45, c:1994.17  
umol/kg,S:33.487  
CRM value measured: AOML 1: offset 4.9umol/kg (1999.0 umol/kg)

Average run time, minimum run time, maximum run time: 10 min, 8 min, 18 min  
Reproducibility: (# samples and average difference): 7 sets of duplicate samples, average difference 0.5 umol/kg  
CRM, salinity and HgCl<sub>2</sub> correction applied: yes

### **Comments**

A GPS transducer was connected to the underway pCO<sub>2</sub> instrument as well as a thermosalinograph (TSG). The GPS and the TSG, a Seabird SBE-21, were maintained by the Ship of Opportunity Program at AOML (<http://www.aoml.noaa.gov/phod/tsg/soop/index.php>).

The latitude, longitude, temperature, and salinity were read immediately after collecting the discrete samples. The TSG salinity was discovered to be not accurate, and the logging of the TSG data had problems on 6 December, 2003. For samples collected on 6 December, the observed position and temperature are associated with the discrete measurements. For the rest of the samples, the position and temperature were taken from the raw TSG data file with the merging being done on the basis of date and time. The TSG values are provided for reference; no post-cruise assurance of accuracy has been done to this data.

The Sample\_ID is the sample bottle number for the discrete samples.